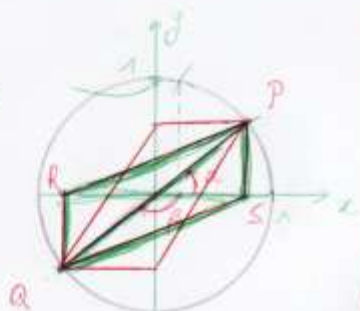
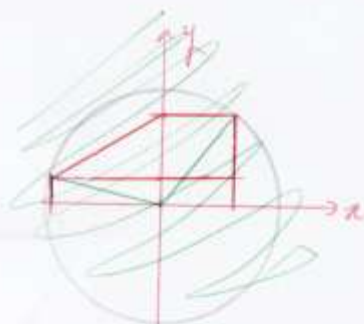


A_{PQRS}



$$A = |RQ| \cdot |RS|$$



$$|RQ| = r$$

$$R(\cos \beta, 0) \parallel \cos \beta = -\cos \alpha$$

$$= R(-\cos \alpha, 0)$$

$$Q(-\cos \alpha, \sin \beta) \parallel \sin \beta = -\sin \alpha$$

$$= Q(-\cos \alpha, -\sin \alpha)$$

$$|RQ| = \sqrt{(-\cos \alpha + \cos \alpha)^2 + (-\sin \alpha)^2} = \sin \alpha$$

$$|RS| = r$$

$$S(\cos \alpha, 0)$$

$$|RS| = \sqrt{(2 \cos \alpha + \cos \alpha)^2} = 2 \cos \alpha$$

$$A = 2 \sin \alpha \cos \alpha$$

$$= \sin 2\alpha$$